

## ABSTRACT

The present invention is a system for controlling exclusive access by control programs (30) to system resources (52). A system in accordance with the invention includes a plurality of addressable locations (12, 14, 16, 18, 20 and 22) in the system; a communication system (24) connecting the addressable locations which transmits communications between the addressable locations; a plurality of machines (26), the machines being located at at least one of the addressable locations; a plurality of control programs which use resources including a plurality of machine control programs, each machine control program controlling at least one machine; and a plurality of resource managers (32), the resource managers being located at a plurality of the addressable locations, each resource manager communicating over the communication system with at least one other resource manager, and the plurality of resource managers arbitrating which control program of the plurality of control programs is given exclusive use of at least one resource during execution of the control program.